

**HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.**

**PETER J. SUTTIE, VOL 1**  
**06/14/00**

1 UNITED STATES DISTRICT COURT  
2 FOR THE DISTRICT OF DELAWARE  
3  
4 HONEYWELL INTERNATIONAL INC., )  
and HONEYWELL INTELLECTUAL )  
5 PROPERTY, INC., )  
6 )  
Plaintiffs, )  
7 )  
vs. ) No. 99-309 (GMS)  
8 HAMILTON SUNSTRAND CORPORATION, )  
9 )  
Defendant. )  
\_\_\_\_\_)  
10  
11  
12  
13  
14  
15 DEPOSITION OF PETER J. SUTTIE  
16 San Diego, California  
17 Wednesday, June 14, 2000  
18 Volume 1  
19  
20  
21  
22  
23  
24 Reported by:  
JOYCE E. HOSTETLER  
CSR No. 5216  
25 Job No. 14531

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22 BEN SMALL, Hamilton Sundstrand Corporation  
23  
24  
25

3

1 UNITED STATES DISTRICT COURT  
2 FOR THE DISTRICT OF DELAWARE  
3  
4 HONEYWELL INTERNATIONAL INC., )  
5 and HONEYWELL INTELLECTUAL )  
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10 vs. ) No. 99-309 (GMS)  
11  
12 HAMILTON SUNDSTRAND CORPORATION, )  
13  
14 Defendant. )

Deposition of PETER J. SUFFIE,  
Volume 1, taken on behalf of Plaintiffs,  
at 600 West Broadway, Suite 1100,  
San Diego, California, beginning at  
9:00 a.m. and ending at 5:10 p.m. on  
Wednesday, June 14, 2000, before JOYCE  
E. HOSTETLER, Certified Shorthand  
Reporter No. 5216.

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5

1 Q And in what year did you receive that degree?  
2 A 1981.  
3 Q And what's the formal title of the degree, a  
4 degree in engineering?  
5 A Bachelor of Science, BSC.  
6 Q Any other formal engineering beyond that?  
7 A No.  
8 Q Did you assume full-time employment after  
9 getting your degree from the University of Edinburgh?  
10 A Yes.  
11 Q Where was the first place you worked?  
12 A Rolls Royce.  
13 Q Where?  
14 A Bristol, England.  
15 Q And did you start at Rolls Royce in 1981?  
16 A Yes.  
17 Q What was your position?  
18 A Graduate trainee.  
19 Q And what were your duties and responsibilities  
20 as a graduate trainee?  
21 A For the first 18 months I was on a rotation  
22 program around various departments within the company.  
23 Q What departments did you work in?  
24 A I worked in systems and controls department. I  
25 worked in the performance department. I also spent time

7

1 San Diego, California, Wednesday, June 14, 2000  
2 9:00 a.m. - 5:10 p.m.  
3

4 PETER J. SUTTIE,  
5 having been first duly sworn, was examined and testified  
6 as follows:  
7

8 EXAMINATION

9 BY MR. PUTNAM:

10 Q Good morning. Can you state your name for the  
11 record, please.

12 A Peter John Suttie.

13 Q And what is your date of birth?

14 A July 3rd, 1960.

15 Q And where were you born?

16 A Dundee, Scotland.

17 Q Are you a United States citizen?

18 A No, I am not.

19 Q Of what country are you a citizen?

20 A I'm British.

21 Q Can you describe your educational background,  
22 please.

23 A I went to high school, I went to the University  
24 of Edinburgh, I did a degree in engineering, an honors  
25 degree.

6

1 working in manufacturing areas, and also time in the  
2 Rolls Royce training college which was manufacturing,  
3 machining and training.

4 Q Was there a particular product that you were  
5 working on during that time?

6 A No.

7 Q So it was a series of different products you  
8 would have had exposure to?

9 A Yes.

10 Q Okay. You said you were a graduate trainee for  
11 18 months. What happened after that?

12 A I started to work for the systems and controls  
13 department.

14 Q At Rolls Royce?

15 A At Rolls Royce.

16 Q How long did you stay at Rolls Royce?

17 A Until October 1985.

18 Q What were your duties and responsibilities in  
19 the systems and controls department?

20 A I was a systems design engineer responsible --  
21 in part responsible for the digital engine control unit  
22 for the Pegasus engine.

23 Q And what was the Pegasus engine used in?

24 A The British Harrier fighter jet AV 8B.

25 Q Is the Pegasus engine an auxiliary power unit?

8

2 (Pages 5 to 8)

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1 A No.  
2 Q Define for me what you understand by the term  
3 "auxiliary power unit."  
4 A A gas turbine engine used to supply power on  
5 board an aircraft which the engine is not considered  
6 flight critical. It is used for extra auxiliary  
7 purposes.  
8 Q In your understanding, are auxiliary power  
9 units used for other applications than aircraft or only  
10 on aircraft?  
11 A Auxiliary power units can be used in other  
12 applications.  
13 Q What other applications are you familiar with?  
14 A Auxiliary power units can be used on boats, but  
15 I am not familiar with the installation or how they are  
16 used.  
17 Q Any other applications you're familiar with?  
18 A No.  
19 Q Let me go back to your work in the systems and  
20 controls department -- I'm sorry, go back to your work  
21 at Rolls Royce. Did you work in the systems and  
22 controls department until you left Rolls Royce in  
23 October 1985?  
24 A I -- no.  
25 Q Where was the next place you worked at

9

1 A No.  
2 Q And did you start working at Sundstrand in  
3 October 1985?  
4 A Yes.  
5 Q Where?  
6 A Rockford, Illinois.  
7 Q Was the name of your employer in October of  
8 1985 Sundstrand or was it something else?  
9 A It was Sundstrand.  
10 Q What position did you have when you were first  
11 hired by Sundstrand?  
12 A Project engineer.  
13 Q And what were you responsible for?  
14 A Assisting marketing department with proposals.  
15 Q For what products?  
16 A I do not know. They were black programs and I  
17 was not privy to what the program was for.  
18 Q When you say "black programs," were they  
19 programs for the military?  
20 A Yes.  
21 Q How did you assist the marketing department if  
22 you didn't know what the programs were?  
23 A Because I supplied technical information.  
24 These programs are divided into pieces. Certain  
25 information was withheld from me: The application,

11

1 Rolls Royce after the systems and controls department?  
2 A Performance department.  
3 Q What were your duties and responsibilities in  
4 the performance department?  
5 A To run computer cycle models of the Pegasus  
6 engine.  
7 Q What period of time did you work in the  
8 performance department?  
9 A I don't recall exactly. Short period. Four  
10 months.  
11 Q What was your next position at Rolls Royce?  
12 A I left the company.  
13 Q Why did you leave the company?  
14 A For opportunity to work with Sundstrand in the  
15 United States.  
16 Q Had you ever worked in the United States before  
17 going to Sundstrand?  
18 A No.  
19 Q How did it happen that you decided to move from  
20 the United Kingdom to the United States?  
21 A Sundstrand advertised in the British press.  
22 Q For what did they advertise?  
23 A For engineers.  
24 Q Did you have family or relatives living in the  
25 United States at the time?

10

1 the -- the detail -- the detailed information on where  
2 our product would go. Specifications are written such  
3 that anybody could -- with engineering background can  
4 supply adequate information.  
5 Q What type of product were you supporting at  
6 that time?  
7 A A fluid pumping system.  
8 Q What is the purpose of a fluid pumping system?  
9 A In that application, I do not know.  
10 Q What sorts of applications might a fluid  
11 pumping system be used on?  
12 MR. MCCracken: Objection; speculative.  
13 THE WITNESS: Do you mean the fluid pumping  
14 system which I was working on or any other fluid pumping  
15 system?  
16 BY MR. PUTMAN:  
17 Q The fluid pumping system you were working on.  
18 A It was a very specialist fluid and used a  
19 liquid, very unusual, so I can't -- I have no idea what  
20 else that might be used for.  
21 Q What was the fluid or liquid used?  
22 A Liquid sulfur dioxide.  
23 Q For how long did you stay in that position as a  
24 project engineer?  
25 A I need clarification of your question. When

12

3 (Pages 9 to 12)

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1 you say "in that position," do you mean describing what  
2 I have just described to you or as a project engineer  
3 doing other things?

4 Q Let me do it this way: Have you worked  
5 continuously for Sundstrand or some affiliated company  
6 since October 1985?

7 A Yes.

8 Q Are you currently based in Rockford, Illinois?

9 A No.

10 Q Where are you currently based?

11 A San Diego.

12 Q Have you been based anywhere other than  
13 Rockford, Illinois or San Diego while working for  
14 Sundstrand?

15 A No.

16 Q When did you move from Rockford, Illinois to  
17 San Diego?

18 A April 1989.

19 Q Let me take it in the two bites. While you  
20 were at Rockford, Illinois, did you hold any positions  
21 other than project engineer?

22 A No.

23 Q While you were at Rockford, Illinois, did you  
24 support any projects or products other than the fluid  
25 pumping system?

13

1 Q Any other projects or applications you worked  
2 on while at Rockford, Illinois?

3 A I performed some computer simulations and  
4 modeling and assisted other project engineers.

5 Q For what applications did you perform computer  
6 simulations or modeling?

7 A I don't recall the name of the program.

8 Q Was it a type of aircraft?

9 A Yes.

10 Q Was it military or commercial?

11 A I don't recall.

12 Q You said in an earlier answer you performed  
13 computer simulations and modeling and assisted other  
14 project engineers. Was that two separate things or one  
15 thing?

16 A Separate things.

17 Q All right. What did you mean by the phrase,  
18 and you "assisted other project engineers"?

19 A If other project engineers working on different  
20 programs needed some short-term assistance, I could  
21 supply that.

22 Q Any specific products or applications you  
23 recall providing such assistance on?

24 A One was the nose wheel steering system for that  
25 same black aircraft that I discussed earlier. I know it

15

1 A Yes.

2 Q What other projects or products?

3 A I worked on an auxiliary gear box for the  
4 Vought A7 program.

5 Q What's the Vought A7 program?

6 A It was a demonstrator for the military.

7 Q Was it a type of aircraft?

8 A Yes, sorry.

9 Q What's an auxiliary gear box?

10 A A gear box which is -- full name is aircraft  
11 mode auxiliary gear box. And -- drive, sorry. And it  
12 is mounted on the aircraft and it connects to the main  
13 propulsion engine.

14 Q What are its functions?

15 A There are two primary functions: One is the  
16 starter of the main engine is attached to this gear box,  
17 so the main engine is started through this gear box.  
18 Once the main engine is running, power comes from the  
19 main engine to the gear box and drives hydraulic pumps  
20 or generators.

21 Q Any other functions?

22 A No.

23 Q Now, you used the term "auxiliary gear box."  
24 Did that aircraft also have a main gear box?

25 A I don't know.

14

1 was the same airplane, but I didn't know what airplane  
2 it was.

3 Q Any other specific projects or products you  
4 recall providing such assistance on?

5 A No.

6 Q Any other duties or responsibilities you had  
7 during the time when you were working for Sundstrand in  
8 Rockford, Illinois?

9 A No.

10 Q You moved to San Diego in April 1989; is that  
11 right?

12 A Correct.

13 Q Have you been based for Sundstrand in San Diego  
14 continuously since April 1989?

15 A Yes.

16 Q How did it happen that you moved from Rockford  
17 to San Diego?

18 A I requested a move and it was approved.

19 Q Why did you request a move?

20 A Personal reasons.

21 Q What position did you assume in San Diego in  
22 April 1989?

23 A Systems engineer.

24 Q All right. Let me first focus on titles and  
25 then I'll come back and do responsibilities.

16

4 (Pages 13 to 16)

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1 For how long did you remain a systems engineer?  
2 A Approximately 10 months.  
3 Q What was the next title you had at Sundstrand?  
4 A Project engineer.  
5 Q What's the difference between a systems  
6 engineer and a project engineer?  
7 A Systems engineer is responsible for the design  
8 of a system. Project engineer was responsible for  
9 getting a job done.  
10 Q So you would have become a project engineer in  
11 early 1990; is that right?  
12 A Correct.  
13 Q For what project were you a project engineer?  
14 A Auxiliary power unit then called the APS 3000.  
15 Q You said "then called the APS 3000." Did that  
16 auxiliary power unit subsequently get a new name?  
17 A Yes.  
18 Q What was that name?  
19 A The APS 3200.  
20 Q When did the APS 3000 become the APS 3200?  
21 A I don't recall.  
22 Q Approximately when?  
23 A Late 1990, early 1991.  
24 Q What was the reason for the name change?  
25 A The 2 in the second digit signified that the

17

1 Q For how long were you a project engineer for  
2 the APS 3000 or 3200?  
3 A Until approximately the third quarter of 1994.  
4 Q What did you do then?  
5 A I became project engineer on a different APU.  
6 Q Which was what?  
7 A The APS 2100.  
8 Q What is the APS 2100?  
9 A It's an APU provided to then McDonnell Douglas,  
10 now Boeing.  
11 Q Now, I've also heard of something called the  
12 APS 2000. Are you familiar with that product?  
13 A At a superficial level.  
14 Q Is the APS 2100 the same as the APS 2000 but  
15 for a different customer?  
16 A What do you mean by "the same"?  
17 Q Well, I thought I understood you to say that  
18 the 3000 and the 3200 were the same but meant for  
19 different customers, the zero in the second digit being  
20 Boeing, the 2 in the second digit being Airbus, and I  
21 was trying to get at whether that same relationship  
22 existed between the 2000 and the 2100.  
23 A The -- when you say -- if you say "the same"  
24 meaning identical, the answer is no, they're not  
25 identical. They are the same basic APU packaged

19

1 customer was Airbus.  
2 Q And did the zero in the second digit signify  
3 something?  
4 A At that point, yes, it did.  
5 Q Which was what?  
6 A Boeing.  
7 Q Did you ever sell the APS 3000 or 3200 to  
8 Boeing?  
9 A No.  
10 Q Did you ever sell, and I'm including up through  
11 today, the APS 3000 or 3200 to anyone other than Airbus  
12 or airlines using Airbus airplanes?  
13 A No.  
14 Q Is Sundstrand making efforts currently to sell  
15 that APU to Boeing?  
16 A No.  
17 Q Okay. When is the last time that Sundstrand  
18 attempted to sell -- let me ask you this way -- an APU  
19 in the 3000 series to Boeing?  
20 A I don't recall exactly.  
21 Q Approximately when?  
22 A 1994.  
23 Q What was the designation of the model you were  
24 trying to sell to Boeing then?  
25 A APS 3000.

18

1 differently for different customers, just as the  
2 APS 3000 to Boeing is not identical to the APS 3200.  
3 Q As I understand your testimony, the APS 3000  
4 that you attempted to sell to Boeing was the same basic  
5 APU packaged differently from the APS 3200 sold to  
6 Airbus, correct?  
7 A Yes.  
8 Q For how long were you a project engineer on the  
9 APS 2100?  
10 A Until approximately April 1995.  
11 Q What was your next position?  
12 A Project engineer responsible for a ground power  
13 unit.  
14 Q What was the name or designation of the ground  
15 power unit?  
16 A We called it by the name of the customer that  
17 it was intended for.  
18 Q Which was what?  
19 A MAK.  
20 Q What's MAK?  
21 A A German company.  
22 Q Was it a ground power unit to be used in  
23 connection with an airplane or not?  
24 A To be used in connection with an airplane.  
25 Q Was there a particular airplane model or series

20

5 (Pages 17 to 20)

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1 that it was to be used in connection with?  
2 A No.  
3 Q Is MAK the name of the German company for whom  
4 this unit was intended?  
5 A Yes.  
6 Q Did Sundstrand actually sell this ground power  
7 unit to MAK?  
8 A Yes.  
9 Q Does it sell that unit to MAK today?  
10 A Yes.  
11 Q For how long were you a project engineer for  
12 that ground power unit?  
13 A Until October of 1995.  
14 Q So from approximately April through October '95  
15 you had that position; is that right?  
16 A Correct.  
17 Q What was your next position?  
18 A Program manager, APS 3200.  
19 Q What were your duties and responsibilities as a  
20 program manager for the APS 3200?  
21 A I was responsible for the technical design of  
22 the APS 3200.  
23 Q What was the difference in your duties and  
24 responsibilities from when you were the project engineer  
25 for the APS 3200 than when you were the program manager

21

1 responsible for Sundstrand's portion of the APU. We now  
2 no longer have a partner; I am responsible for the whole  
3 APS 3200.  
4 Q Have they changed in any other way?  
5 A No.  
6 Q Am I correct that since October 1995 you have  
7 been the individual with overall responsibility at  
8 Sundstrand for the technical aspects of the APS 3200?  
9 A That's correct.  
10 Q You mentioned you had a partner. Who was that  
11 partner?  
12 A Turbomeca.  
13 Q What is Turbomeca?  
14 A A French engine company, gas turbine engine  
15 company.  
16 Q When did Turbomeca leave the picture?  
17 A December 1996.  
18 Q And what happened in December 1996?  
19 A Sundstrand purchased their half of the  
20 partnership.  
21 Q Purchased Turbomeca's half of the partnership?  
22 A Correct.  
23 Q I've seen a reference to something called  
24 APIC. Are you familiar with that acronym?  
25 A Yes.

23

1 for the APS 3200?  
2 A When I was the project engineer, it was during  
3 the development phase of the APU and I was responsible  
4 solely for the control system. Subsequently the APU was  
5 no longer in development, I was responsible for the  
6 whole APU.  
7 Q From a technical perspective or from a  
8 marketing perspective or both, or what was the subject  
9 matter scope of your responsibility?  
10 A At which time period?  
11 Q In October 1995.  
12 A From a technical point of view.  
13 Q For how long were you the technical manager for  
14 the APS 3200?  
15 A Present day.  
16 Q Have you been the program manager for the  
17 APS 3200 continuously since October 1995?  
18 A Yes.  
19 Q Are your duties and responsibilities as program  
20 manager for the APS 3200 today the same as the -- what  
21 they were in October 1995 which you described in the  
22 earlier answer?  
23 A No.  
24 Q How have they changed?  
25 A In October, 1995 we had a partner, so I was

22

1 Q What was APIC?  
2 A APIC was the name of the joint venture company.  
3 Q Between Sundstrand and Turbomeca?  
4 A Correct.  
5 Q And am I correct that in December 1996  
6 Sundstrand bought out Turbomeca's half of APIC?  
7 A Correct.  
8 Q And since December 1996 Sundstrand has been the  
9 sole owner of APIC; is that correct?  
10 A Correct.  
11 Q When was APIC created?  
12 A I don't recall exactly.  
13 Q Was it created before you went to work for  
14 Sundstrand in San Diego in April 1989?  
15 A No.  
16 Q How long after you got to Sundstrand in  
17 San Diego was it created?  
18 A I don't recall exactly.  
19 Q You said that you started working as a project  
20 engineer for the APS 3000 and then 3200 in early 1990.  
21 Had APIC been created at that point?  
22 A I don't recall exactly.  
23 Q Did Sundstrand and Turbomeca each own half of  
24 APIC; that is, 50 percent of APIC?  
25 A Yes.

24

6 (Pages 21 to 24)

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1 Q Was there ever a time during the existence of  
2 APIC that anyone else owned any part of APIC?  
3 A No.  
4 Q Through December 1996 was there ever a time  
5 when Sundstrand's and Turbomeca's ownership share was  
6 anything other than 50-50?  
7 A Not to my knowledge.  
8 Q While you were project engineer -- I'm sorry.  
9 while you were program manager for the 3200  
10 before Sundstrand bought out Turbomeca, was there a  
11 person at Turbomeca who was your counterpart? That is  
12 to say, the program manager for that product for  
13 Turbomeca?  
14 A Yes.  
15 Q Who was that?  
16 A Dominic Tuquoi.  
17 Q Can you spell that, please?  
18 A T-u-q-u-o-i.  
19 Q Where was he based?  
20 A In France.  
21 Q Did Turbomeca ever have employees based in the  
22 United States related to the 3200 or 3000?  
23 A Yes.  
24 Q At what point in time?  
25 A Approximately the end of '89 through

25

1 A No.  
2 Q To whom do you report today?  
3 A The APS 3200 product line business manager.  
4 Q And what is that person's name?  
5 A Karl Johanson.  
6 Q For how long has Mr. Johanson had that  
7 position?  
8 A Approximately three years.  
9 Q Have you reported to Mr. Johanson continuously  
10 during that three-year period?  
11 A Yes.  
12 Q To whom does Mr. Johanson report?  
13 A Our vice president.  
14 Q Who is that?  
15 A Tim Morris.  
16 Q Could you spell the last name, please?  
17 A M-o-r-r-i-s.  
18 Q To whom does Mr. Morris report?  
19 A A vice president in Hamilton Sundstrand.  
20 Q Is Mr. Morris -- let me ask you this right. I  
21 take it Sundstrand was purchased by United Technologies  
22 last year; is that correct?  
23 A Correct.  
24 Q And was the company that used to be Sundstrand  
25 renamed Hamilton Sundstrand?

27

1 approximately 1994.  
2 Q As I understand your testimony,  
3 Mr. Tuquoi was the program manager for the 3200 at  
4 Turbomeca just prior to the time that Turbomeca sold its  
5 portion of APIC to Sundstrand; is that correct?  
6 A He was the technical program manager.  
7 Q As of approximately December 1996; is that  
8 correct?  
9 A Correct.  
10 Q For how long back had he had that position?  
11 A I don't recall exactly.  
12 Q Are there any other individuals at Turbomeca  
13 who you recall having that position?  
14 A Yes.  
15 Q Who?  
16 A Gerard Hardy.  
17 Q Was he based in France as well?  
18 A Yes.  
19 Q During what period of time did he have that  
20 position?  
21 A I don't recall exactly.  
22 Q Prior to Mr. Tuquoi; is that right?  
23 A Correct.  
24 Q Any other individuals from Turbomeca who had  
25 that position?

26

1 A Correct.  
2 Q Does Hamilton Sundstrand today consist of  
3 anything different than what Sundstrand -- that  
4 Sundstrand was prior to the acquisition?  
5 A I don't know.  
6 Q Put differently, has Sundstrand -- has Hamilton  
7 Sundstrand added or subtracted businesses from what used  
8 to be Sundstrand Corporation?  
9 A I don't know.  
10 Q When you said Mr. Morris reported to a vice  
11 president at Hamilton Sundstrand, does Mr. Morris report  
12 to someone who pre-merger was a United Technologies  
13 person or someone who was a Sundstrand person  
14 pre-merger?  
15 A Pre-merger, it was a United Technologies  
16 person.  
17 Q Who was the CEO of Sundstrand pre-merger?  
18 A The CEO?  
19 Q Yes, sir.  
20 A A man called Mr. Jenkins.  
21 Q Who is the executive head of Hamilton  
22 Sundstrand today?  
23 A A man named Ron McKenna.  
24 Q And what's his title?  
25 A I don't know exactly.

28

7 (Pages 25 to 28)

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HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 Q But he's effectively the CEO of Hamilton  
2 Sundstrand; is that correct?  
3 A As I understand it.  
4 Q Did he work for Sundstrand or for United  
5 Technologies pre-merger?  
6 A Sundstrand.  
7 Q And did he have a position below Mr. Jenkins  
8 pre-merger?  
9 A Yes.  
10 Q Is Mr. Jenkins still with Sundstrand or  
11 Hamilton Sundstrand or United Technologies?  
12 A I don't know.  
13 Q Does Mr. Morris report to Mr. McKenna at some  
14 level up the chain or not?  
15 A At some level.  
16 Q But I take it there's at least one person in  
17 between Morris and McKenna; is that correct?  
18 A Yes.  
19 Q Do you know how many people are in between  
20 there?  
21 A Yes.  
22 Q How many?  
23 A One.  
24 Q Who is that?  
25 A Dave Hess.

29

1 has responsibility?  
2 A Can you repeat the -- not your question but  
3 what occurred previous to the question?  
4 Q I said, am I correct that Mr. Johanson has  
5 responsibility both for the APS 3200 and the APS 2000?  
6 You said yes. Then I said, are there any other APUs for  
7 which Mr. Johanson has responsibility?  
8 A Yes.  
9 Q What are those?  
10 A APS 2100.  
11 Q Any others?  
12 A Not to my knowledge.  
13 Q Are there any APUs that Sundstrand currently  
14 sells other than the 2000, the 2100 and the 3200?  
15 A Yes.  
16 Q What are the designations of those?  
17 A I don't recall them all.  
18 Q Which ones do you recall?  
19 A APS 500, APS 1000, Gemini.  
20 Q Any others that you recall?  
21 A No.  
22 Q Now, McDonnell Douglas has been purchased by  
23 Boeing, correct?  
24 A Yes.  
25 Q Does Sundstrand currently sell both the

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1 Q So you report to Johanson who reports to Morris  
2 who reports to Hess who reports to McKenna, correct?  
3 A Correct.  
4 Q Who else reports to Johanson today?  
5 A Do you want me to list the people?  
6 Q How many people are there?  
7 A Five.  
8 Q Yes, can you please list them and tell me what  
9 their positions are.  
10 A Chris Hayden, project engineer.  
11 Q For the APS 3200?  
12 A For the APS 3200. Steve Sachrison, project  
13 engineer for the APS 3200. Tim Sullivan, project  
14 manager for the APS 2000. Michele Allee, A-1-1-e-e,  
15 secretary.  
16 Q You said five. And yourself as No. 5 or  
17 there's also another person that reports to  
18 Mr. Johanson?  
19 A Myself is No. 5.  
20 Q Anyone else who reports to Mr. Johanson?  
21 A I don't know.  
22 Q Am I correct that Mr. Johanson has  
23 responsibility both for the APS 3200 and the APS 2000?  
24 A Yes.  
25 Q Are there any other APUs for which Mr. Johanson

30

1 APS 2000 and the APS 2100?  
2 A I'm not exactly sure.  
3 Q What do you mean by that?  
4 A The APS 2000 was for a model of Boeing  
5 aircraft, and I'm not sure that it's still in  
6 production.  
7 Q What model was the 2000 for?  
8 A The Boeing 737 Classic.  
9 Q Did Sundstrand ever sell an APS in the 2000  
10 series to Boeing for any of the later generation of 737s  
11 after the Classic series?  
12 A No.  
13 Q What was the APS 2100 sold for, what plane or  
14 planes?  
15 A The airplane originally known as the MD-85,  
16 later designated Boeing 717.  
17 Q And that plane is currently in production,  
18 correct?  
19 A Correct.  
20 Q And is Sundstrand currently selling the  
21 APS 2100 to Boeing?  
22 A Yes.  
23 Q Has Sundstrand ever sold APUs to Boeing other  
24 than the 2000 and the 2100?  
25 A I don't know.

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8 (Pages 29 to 32)

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HONEYWELL V.  
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1 Q For what airplane or airplanes was the APS 500  
2 sold?  
3 A I don't know the model.  
4 Q Which do you know?  
5 A Embraer 145.  
6 Q Anything else?  
7 A No.  
8 Q For what airplanes was the APS 1000 sold?  
9 A I don't know them all.  
10 Q What do you know?  
11 A The Saab 2000.  
12 Q Any others?  
13 A Not that I'm sure of.  
14 Q Any others that you think it was sold for?  
15 A No.  
16 Q Did the APS 500 have adjustable inlet guide  
17 vanes?  
18 MR. MCCracken: Objection on relevancy. And I  
19 will make this comment only once, Jonathan, that any  
20 questions directed to models other than at issue are  
21 irrelevant, and I will make a general objection so that  
22 I don't keep interrupting.  
23 MR. PUTNAM: Your objection is noted, and I  
24 appreciate your not continuing to interrupt. I'm  
25 obviously happy for you to make objection for the

33

1 3200 and Gemini, has Sundstrand ever sold or offered for  
2 sale any other APU model?  
3 A I don't know.  
4 Q Am I right that to your knowledge, there are no  
5 other models of APUs that have been sold or offered for  
6 sale?  
7 A True statement.  
8 Q Does the APS 2000 have adjustable inlet guide  
9 vanes?  
10 A No.  
11 Q Does the APS 2100 have adjustable inlet guide  
12 vanes?  
13 A No.  
14 Q Does the APS 3200 have adjustable inlet guide  
15 vanes?  
16 A Yes.  
17 Q Did the APS 3000 have adjustable inlet guide  
18 vanes?  
19 A An APS 3000 has never been manufactured.  
20 Q Other than the APS 3200, has Sundstrand ever  
21 sold an APU with adjustable inlet guide vanes?  
22 A Yes.  
23 Q What other APUs?  
24 A An APU we call KC-135.  
25 Q And is that currently sold?

35

1 record.  
2 Q Does the APS 500 have adjustable inlet guide  
3 vanes?  
4 A No.  
5 Q Does the APS 1000 have adjustable inlet guide  
6 vanes?  
7 A No.  
8 Q The Gemini, for what airplanes has the Gemini  
9 been sold?  
10 A I don't know.  
11 Q Do you know any that it's been sold for?  
12 A No.  
13 Q Is the APS 500 currently being sold by  
14 Sundstrand?  
15 A Yes.  
16 Q Is the APS 1000 currently being sold by  
17 Sundstrand?  
18 A Yes.  
19 Q Is the Gemini APU currently being sold by  
20 Sundstrand?  
21 A I don't know.  
22 Q Did the Gemini APU have adjustable inlet guide  
23 vanes?  
24 A No.  
25 Q Other than the 500, 1000, 2000, 2100, 3000,

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1 A I don't know.  
2 Q And was that sold for the KC-135 military  
3 aircraft?  
4 A Correct.  
5 Q Who is the manufacturer of the KC-135?  
6 A I don't understand the question.  
7 Q The airplane, the KC-135, who made that  
8 airplane?  
9 A I don't know.  
10 Q And as I understand your testimony, that the  
11 APU for the KC-135 was just known inside Sundstrand as  
12 the KC-135 APU; is that correct?  
13 A That's how I know it.  
14 Q And was that APU sold for any other  
15 applications?  
16 A I don't know.  
17 Q Other than the APS 3200 and the KC-135, has  
18 Sundstrand ever sold APUs with adjustable inlet guide  
19 vanes?  
20 A Not to my knowledge.  
21 MR. PUTNAM: Let's take a short break. We're  
22 about to move to a new topic. We've been going just  
23 about an hour.  
24 MR. MCCracken: Sure.  
25 (Recess.)

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9 (Pages 33 to 36)

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1 BY MR. PUTNAM:  
2 Q I want to focus for a minute, Mr. Suttie, on  
3 the period where you were the project engineer for the  
4 APS 3000 and then 3200 which I think you've said earlier  
5 was between early 1990 and approximately the third  
6 quarter of 1994. My first question is, were you the one  
7 and only, quote-unquote, project engineer at Sundstrand  
8 for the APU during that period or were there other  
9 people who also had that title?  
10 A First question, no, I was not the only person.  
11 There were other people.  
12 Q How many other people were called project  
13 engineers for that APU, the 3000/3200?  
14 A Three to four.  
15 Q Okay. And were they responsible for parts of  
16 the APU that were different than the parts of the APU  
17 for which you were responsible?  
18 A Yes.  
19 Q What was the part of the APU for which you were  
20 the project engineer?  
21 A The control system.  
22 Q What was the control system?  
23 A The electronic control box, the software inside  
24 that box, and the electrical line replaceable units  
25 mounted on the APU.

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1 each responsible for?  
2 A Joan Inlow was responsible for the combustion  
3 system and testing of the APU. Nick Watling was  
4 responsible for the gear box for a portion of the time.  
5 Ray Deaton was responsible for mechanical LRUs.  
6 Q Did you say LIUs?  
7 A LRUs.  
8 Q What are those?  
9 A Line replaceable units.  
10 Q And what else?  
11 A Stan McHale picked up the gear box  
12 responsibility after Nick Watling.  
13 Q Anyone else?  
14 A No.  
15 Q Does the control system, the combustion system,  
16 the gear box and the mechanical LRUs, does that  
17 encompass the whole APU as to which there were  
18 engineering activities?  
19 A Can you clarify your question, please.  
20 Q I just want to understand the overall scope of  
21 work that was done. You've said that you were project  
22 engineer for the control system. You've then given me  
23 project engineers for other systems or components. And  
24 my question is, if I add all those systems and  
25 components together for which you've identified the

39

1 Q What's the -- what are you referring to by the  
2 electrical line replaceable units?  
3 A Sensors, starter motor, but not mechanical  
4 LRUs.  
5 Q And did those electrical line replaceable units  
6 then lead to the electronic control box?  
7 A What do you mean by "lead to"?  
8 Q Well, did they supply inputs for the electronic  
9 control box?  
10 A Yes.  
11 Q Did they have any other function?  
12 A No.  
13 Q Were you the only project engineer for the  
14 control system for the APS 3000/3200 during that time?  
15 A No.  
16 Q Who else was a project engineer for the control  
17 system during that time?  
18 A Other people had a subset responsibility.  
19 Q And did those people report to you?  
20 A Effectively.  
21 Q Were there people at that period of time who  
22 were project engineers for parts of the APU other than  
23 the control system?  
24 A Yes.  
25 Q Who were they and what parts of the APU were

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1 project engineer, is that effectively the whole APU as  
2 to which there's any engineering or are there other  
3 portions of the APU that haven't been covered?  
4 A So you've asked two questions. First is no.  
5 Second, Turbomeca was responsible.  
6 Q Okay. What was Turbomeca responsible for?  
7 A The first-stage turbine, second-stage turbine,  
8 power section compressor and the load compressor.  
9 Q What was the third of those four things that  
10 you said?  
11 A Power section compressor.  
12 Q Okay. First question is, if you add those  
13 things that Turbomeca was responsible for plus those  
14 things as to which you've identified the Sundstrand  
15 project engineer, is that the whole APU?  
16 A Yes.  
17 Q Okay. What's the first-stage turbine?  
18 A A cylindrical piece of metal in the engine.  
19 Q And what does it do?  
20 A Hot gas goes through the turbine which makes  
21 the turbine move.  
22 Q What's the second-stage turbine?  
23 A It's the same function as the first stage.  
24 Q What's the relation between the first- and the  
25 second-stage turbines?

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10 (Pages 37 to 40)

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1 A In combination, they extract energy from the  
2 hot gas.  
3 Q Does the gas first travel through the  
4 first-stage turbine and then through the second-stage  
5 turbine?  
6 A Correct.  
7 Q What is the power section compressor?  
8 A It is an air compressor which supplies air for  
9 the power section of the APU.  
10 Q And what's the load compressor?  
11 A A compressor which supplies air to the  
12 customer.  
13 Q The customer here being the airline, the  
14 airplane; is that right?  
15 A The airplane.  
16 Q And on the 3000 and 3200, I think you said  
17 before, that APU has adjustable inlet guide vanes,  
18 correct?  
19 A Correct.  
20 Q Am I correct that those adjustable inlet guide  
21 vanes are mounted on the inlet of the load compressor?  
22 A Yes.  
23 Q Does the power compressor have adjustable inlet  
24 guide vanes?  
25 A No.

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1 A Steve Gates.  
2 Q And he was the program manager at the time for  
3 the 3000/3200?  
4 A Not all of that time.  
5 Q Okay. For a part of the time, though, he was  
6 that position?  
7 A Yes.  
8 Q And did you report to him only for that part of  
9 time when he held that position?  
10 A Can you repeat that, please.  
11 Q I'm sorry. Are there other people besides  
12 Mr. Gates who were program manager during the time that  
13 you were the project engineer?  
14 A Yes.  
15 Q Who else?  
16 A Bob White.  
17 Q Anyone else?  
18 A No.  
19 Q At what point in time was Bob White program  
20 manager?  
21 A From program inception to December 1991.  
22 Q Was the inception of the program in early 1990  
23 when you assumed the position of project engineer, or  
24 had the program started before then?  
25 A Before then.

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1 Q Are the load compressor and the power  
2 compressor in two different locations on the APU?  
3 A Yes.  
4 Q Couldn't you just draw in air from one source  
5 and send some to the power and some to the customer?  
6 A No.  
7 Q Why not?  
8 A The pressure at output to the two impellers is  
9 different.  
10 Q Which is higher?  
11 A Power section is higher.  
12 Q Meaning the pressure of the air you send to the  
13 power section is higher than the pressure of the air  
14 that you're going to send to the airplane; is that  
15 correct?  
16 A No, it's not correct.  
17 Q Okay. What's wrong with that statement?  
18 A You said "send to." It's output from those  
19 impellers. You misstated. The air going into the  
20 impeller is ambient air. The air coming out of the  
21 impellers are under different pressure.  
22 Q When you were the project engineer for the  
23 control system, to whom did you report?  
24 A The program manager.  
25 Q Who was that?

42

1 Q When?  
2 A I don't know.  
3 Q Approximately how long before you arrived at  
4 that position?  
5 A My first involvement in the program was July of  
6 1989.  
7 Q Okay. And how long had the program been going  
8 on at that time, approximately?  
9 A I don't know.  
10 Q Years, months?  
11 A A very short period, I believe. But I do not  
12 know exactly.  
13 Q But it's your belief that it was a short period  
14 before -- strike that. Your testimony is clear on  
15 that.  
16 Here's the question that I don't understand,  
17 though. I thought you only became project engineer for  
18 the program in early 1990. How is it that you started  
19 working on the program in July of 1989?  
20 A I mentioned I was a systems engineer prior.  
21 Q Okay. And you were a systems engineer for what  
22 as of July of 1989?  
23 A For the APS 3200 -- 3000, as it was then  
24 called, APU.  
25 Q And you then became -- or in early 1990 you

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11 (Pages 41 to 44)

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HONEYWELL V.  
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1 became project engineer for that same project?  
2 A Correct.  
3 Q And during the period when you were systems  
4 engineer, were you a systems engineer on the control  
5 system?  
6 A Yes.  
7 Q Was it a promotion to go from systems engineer  
8 to project engineer?  
9 A I don't recall.  
10 Q Had someone else been the project engineer for  
11 the control system before you assumed that position in  
12 early 1990?  
13 A No.  
14 Q You said Mr. White was the program manager from  
15 the inception through December 1991. For what period of  
16 time was Mr. Gates the program manager?  
17 A From December 1991 through approximately the  
18 second quarter of 1994.  
19 Q What happened then?  
20 A He left the company.  
21 Q Did someone replace him as program manager?  
22 A Yes.  
23 Q Who?  
24 A The function was split into two.  
25 Q And --

45

1 A Because of the volume of technical work, he was  
2 not involved in the details on a daily basis.  
3 Q But he was the vice president of engineering,  
4 correct?  
5 A Yes.  
6 Q And at that position he had overall  
7 responsibility for the creation, design and engineering  
8 of the APS 3200, correct?  
9 A Yes.  
10 Q Is it fair to say that Sundstrand employees did  
11 more of the work on designing and creating the APS 3200  
12 than did Turbomeca employees?  
13 A Can you repeat that?  
14 MR. PUTNAM: Let me ask the court reporter to  
15 read it back.  
16 (Last question read.)  
17 THE WITNESS: No, it's not fair to say that.  
18 BY MR. PUTNAM:  
19 Q Was it a roughly even split between the two  
20 companies?  
21 A I don't know.  
22 Q Was the design and engineering of the APS 3200  
23 split evenly between France and San Diego or did it  
24 mostly occur in San Diego?  
25 A The intention was to split it evenly.

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1 A Tim Morris took on the senior role and Jane  
2 Lanham took on the role of technical program manager.  
3 Q Did the other project engineers for the  
4 APS 3000 and 3200 similarly report to the program  
5 manager; that is, Mr. White and then Mr. Gates?  
6 A Yes.  
7 Q I've heard a reference to a Mr. Ducroux -- I'm  
8 sure I'm pronouncing it wrong -- D-u-c-r-o-u-x. Are you  
9 familiar with that individual?  
10 A Yes.  
11 Q How would I pronounce it correctly?  
12 A You did very good.  
13 Q What was his position in the early 1990s?  
14 A He was vice president of engineering of APIC.  
15 Q Was he a Sundstrand employee or a Turbomeca  
16 employee?  
17 A Turbomeca.  
18 Q Where was he based physically?  
19 A In San Diego.  
20 Q Was Mr. Ducroux, as vice president of  
1 engineering at APIC, was he the individual with overall  
2 responsibility for the design and creation of the  
3 APS 3200?  
4 A As a vice president level, yes.  
5 Q What do you mean by that qualification?

46

1 Q And is that what actually happened?  
2 A I don't know.  
3 Q Okay. How did it happen that Mr. Ducroux was  
4 based in San Diego?  
5 A APIC was staffed by people from both parent  
6 companies. I don't -- was not a part of the discussion  
7 which decided who the various employees would be or what  
8 their functions were.  
9 Q Were some Sundstrand employees stationed in  
10 France during the development of the 3200?  
11 A Yes.  
12 Q And I take it those would be the Sundstrand  
13 employees who worked on the portions of the APS that  
14 Turbomeca was responsible for; is that correct?  
15 A No.  
16 Q Did Mr. Ducroux stay with Sundstrand after  
17 Sundstrand purchased all of APIC?  
18 A No.  
19 Q For how long did Mr. Ducroux work for either  
20 APIC or -- APIC?  
21 A I don't know exactly.  
22 Q Approximately?  
23 A Early 1990 through 19 -- mid-1994.  
24 Q And then he left APIC; is that correct?  
25 A He left APIC, that is correct.

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12 (Pages 45 to 48)

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HONEYWELL V.  
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1 Q Did he go back to Turbomeca?  
2 A Yes.  
3 Q Is he still at Turbomeca?  
4 A Yes.  
5 Q Do you know where he is based geographically  
6 today?  
7 A Yes.  
8 Q Where is that?  
9 A Dallas, Texas.  
10 Q Does Turbomeca have an operation in Dallas,  
11 Texas?  
12 A Yes.  
13 Q Which business do they have in Dallas, Texas?  
14 A As I understand it, it's supporting  
15 North American customers.  
16 Q Of Turbomeca?  
17 A Of Turbomeca.  
18 Q Does Turbomeca currently play any role in  
19 selling the APS 3200?  
20 A Yes.  
21 Q What role is that?  
22 A Prospective European military programs.  
23 Q Turbomeca assists in selling the 3200 for such  
24 programs; is that correct?  
25 A Yes.

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1 Q What airplanes has the 3200 been sold for? Let  
2 me start, what commercial airplanes has the 3200 been  
3 sold for?  
4 A The Airbus A319, the Airbus A320 and the Airbus  
5 A321.  
6 Q Any others?  
7 A No.  
8 Q To your understanding, in the agreement between  
9 Sundstrand and Turbomeca in which Sundstrand acquired  
10 APIC, did Sundstrand acquire the rights to make all  
11 sales to all three of those airplane designations?  
12 A To my knowledge, yes.  
13 Q What military airplanes has the 3200 been sold  
14 for?  
15 A None.  
16 Q Is Sundstrand currently involved in any efforts  
17 to sell the 3200 for military applications?  
18 A What do you mean by "any efforts"?  
19 Q Does Sundstrand currently have any involvement  
20 in trying to sell the 3200 to military applications?  
21 A Yes.  
22 Q For what applications?  
23 A The Lockheed C5 reengine program.  
24 Q I'm sorry, the reengine -- the engine program?  
25 A Lockheed C5 reengine program.

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1 Q To your understanding, is that part of the  
2 agreement between Sundstrand and Turbomeca under which  
3 Sundstrand acquired the rest of APIC?  
4 A When Sundstrand purchased Turbomeca's part of  
5 APIC, they bought only the rights to certain markets,  
6 not worldwide license.  
7 Q What markets did Sundstrand buy the rights for?  
8 A I do not know exactly.  
9 Q What is it that you do know?  
10 A Commercial business in the passenger range from  
11 100 to 200 passengers.  
12 Q Has the APS 3200 ever been sold for an airplane  
13 with more than 200 passengers?  
14 A In some configurations, the A321 Airbus  
15 airplane can hold more than 200 passengers.  
16 Q And is it your understanding that as to those  
17 configurations, Sundstrand does not have the right to  
18 sell the APS 3200?  
19 A It is my understanding that Sundstrand does  
20 have the right. I prefaced this with "I'm not exactly  
21 sure."  
22 Q Other than that type of configuration of the  
23 A321, has the 3200 been sold for any airplane that holds  
24 more than 200 passengers?  
25 A No.

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1 Q And is that a prospective sale as to which  
2 Sundstrand or Turbomeca has the right?  
3 A Neither independently.  
4 Q So to your understanding, Sundstrand and  
5 Turbomeca share the right to make a sale for the  
6 Lockheed C5?  
7 A Yes.  
8 Q Are Sundstrand and Turbomeca actively  
9 attempting to sell the 3200 for the Lockheed C5?  
10 A What do you mean by "actively"?  
11 Q Are there ongoing efforts to try to make that  
12 sale?  
13 A There are ongoing efforts to discuss the  
14 program.  
15 Q With Lockheed?  
16 A With Lockheed.  
17 Q Are both Sundstrand and Turbomeca involved in  
18 those efforts?  
19 A No.  
20 Q Who is involved in those efforts?  
21 A Sundstrand. Hamilton Sundstrand.  
22 Q Is Sundstrand involved, currently involved in  
23 efforts to sell the 3200 for military applications other  
24 than the Lockheed C5?  
25 A No.

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13 (Pages 49 to 52)

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HONEYWELL V.  
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06/14/00

1 Q Is Sundstrand -- and I take it you understand  
2 when I say "Sundstrand currently," you prefer it to be  
3 called Hamilton Sundstrand. Is that your understanding  
4 as well?

5 A I understand when you say Sundstrand, you mean  
6 now Hamilton Sundstrand.

7 Q Is Sundstrand currently involved in efforts to  
8 try to sell the 3200 for any commercial application  
9 other than the 319, 320 or 321?

10 A No.

11 Q Is Sundstrand currently involved in efforts to  
12 sell any 3000 series APU for airplanes other than the  
13 319, 320 or 321?

14 A Can you repeat that, please.

15 MR. PUTNAM: Can you read it back, please.  
16 (Last question read.)

17 THE WITNESS: I already mentioned CS.

18 BY MR. PUTNAM:

19 Q Other than CS?

20 A Not actively.

21 Q When you say "not actively," what do you mean  
22 by that qualification?

23 A In the aviation press, other air frames are  
24 discussed which may or may not require an APU of the  
25 3200 size. We're doing nothing until approached by

53

1 customers.

2 Q You said the phrase "APU of the 3200 size."  
3 What did you mean by that phrase?

4 A Power or capability.

5 Q And how would you quantify that power  
6 capability?

7 A Combination of generator load and pneumatic air  
8 supply.

9 Q And does that effectively translate into a  
10 certain size airplane for which the 3200 would be  
11 appropriate?

12 A Loosely.

13 Q In other words, would there be certain  
14 airplanes as to which the 3200 was too big or too  
15 powerful?

16 A Yes.

17 Q And would there be certain airplanes as to  
18 which the 3200 was too small to provide sufficient  
19 power?

20 A Yes.

21 Q What's the size range as to which the APU 3200  
22 is appropriately sized?

23 A For traditional commercial applications?

24 Q Yes, sir.

25 A Approximately 140 passengers to 200 passengers.

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1 Q And I take it the A319, A320 and A321 all fall  
2 into that passenger range?

3 A Correct.

4 Q What other aircraft worldwide fall into that  
5 passenger range?

6 MR. MCCracken: Objection, irrelevance.

7 THE WITNESS: I don't know a complete list.

8 BY MR. PUTNAM:

9 Q What do you know?

10 A The Boeing 737 New Generation.

11 Q Any others?

12 A Not that I know of.

13 Q Does the 757 fit into that range?

14 A I don't know exactly.

15 Q Would an APU of the size of the 3200 work for  
16 the 757?

17 A No.

18 Q Why not?

19 A It's insufficient power to start the main  
20 engines.

21 Q How about the 767 or 777, is it the same  
22 answer?

23 A Insufficient power.

24 Q For both of those?

25 A Yes.

55

1 Q And the A330 and A340 series, would an APU of  
2 the 3200 size work for those airplanes?

3 A No.

4 Q Again, insufficient power?

5 A Correct.

6 Q Is there a term that you would typically use  
7 for the 140 to 200 passenger airplane? And I want to  
8 ask you some questions about it. I'm trying to figure  
9 out if there's some shorthand term that you would be  
10 comfortable with using for that size of airplane. For  
11 instance, mid-size commercial planes? I'm just trying  
12 to figure out -- we can make up a term if you want, but  
13 if there is some term that you would use in your  
14 ordinary business, that's usually better to use in  
15 depositions.

16 A There is not a term we normally use.

17 Q What other companies make APUs that would be  
18 appropriate for airplanes of approximately 140 to 200  
19 passengers?

20 A You're asking me to name other companies?

21 Q Yes, sir.

22 A I know of at least one, Allied Signal.

23 Q Any others?

24 A There may be some Russian companies that I'm  
25 not familiar with.

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HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 Q Any other companies beside Allied Signal that  
2 you can name?  
3 A No.  
4 Q By model designation, what APU or APUs made by  
5 Allied Signal are of a size that they'd be appropriate  
6 for airplanes carrying approximately 140 to 200  
7 passengers?  
8 A To my understanding, the 36-300 APU, No. 131-9  
9 APU.  
10 Q And both of those are made by Allied Signal,  
11 correct?  
12 A Yes.  
13 Q And do you understand that Allied Signal has  
14 now been renamed Honeywell?  
15 A I do.  
16 Q So if I use the word "Honeywell" to refer to  
17 Allied Signal, that will make sense to you?  
18 A Will you use Honeywell to refer solely to  
19 Allied Signal?  
20 Q In this context, yes. Does that make sense to  
21 you?  
22 A Okay.  
23 Q And both the 36-300 and the 131-9 are APUs made  
24 and sold by Honeywell. That's your understanding?  
25 A Yes.

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1 by a customer several months ago, what type of APU was  
2 that?  
3 A To my knowledge, it was a 36-150.  
4 Q And that's a type of APU manufactured by  
5 Allied Signal/Honeywell, correct?  
6 A Yes.  
7 Q Is that an APU that is of the size that it  
8 could operate on a plane configured for approximately  
9 140 to 200 passengers?  
10 A No.  
11 Q Is it smaller than that or larger than that?  
12 A Smaller.  
13 Q What happened to that APU after it was sent  
14 erroneously to Sundstrand?  
15 A I don't know.  
16 Q Does Sundstrand still have it in its  
17 possession?  
18 A No.  
19 Q Was any testing done on that APU when it was in  
20 Sundstrand's possession?  
21 A No.  
22 Q Okay. The other time that you said Sundstrand  
23 had in its possession an APU manufactured by  
24 Allied Signal was the early 1990s, correct?  
25 A Correct.

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1 Q Are you familiar with an APU which had the  
2 designation 36-250?  
3 A No.  
4 Q Are you familiar with an APU that had the  
5 designation 36-200?  
6 A No.  
7 Q Have you ever heard of APUs with designation of  
8 36-250 or 36-200?  
9 A No.  
10 Q Has Sundstrand ever had in its possession an  
11 APU manufactured by Allied Signal or Honeywell?  
12 A Yes.  
13 Q On how many occasions?  
14 A I don't know.  
15 Q Approximately how many occasions?  
16 A I can only recall, myself, two.  
17 Q When were those occasions?  
18 A One, the most recent was about four months ago,  
19 an APU was sent to us erroneously by a customer.  
20 Q When was the other occasion that you can  
21 recall?  
22 A In the early '90s.  
23 Q Okay. I'm sorry, were you going to elaborate?  
24 A No.  
25 Q Okay. When an APU was sent to you erroneously

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1 Q What was the model of APU that Sundstrand had  
2 in its possession at that time?  
3 A I don't recall exactly.  
4 Q What's your best understanding of what it was?  
5 A It was 36-300.  
6 Q How did it come about that Sundstrand had an  
7 Allied Signal 36-300 in its possession in the early  
8 1990s?  
9 A I don't know.  
10 Q Did Sundstrand do testing of the 36-300 at that  
11 time?  
12 A No.  
13 Q Did Sundstrand examine the 36-300 at that time?  
14 A No.  
15 Q For how long was the 36-300 in Sundstrand's  
16 possession?  
17 A I don't recall.  
18 Q Did you ever physically look at it?  
19 A It was in a box. We took the lid off the box.  
20 Q What else did you do besides taking the lid off  
21 the box?  
22 A We looked at it.  
23 Q Did you ever operate it?  
24 A No.  
25 Q Over what period of time do you recall looking

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15 (Pages 57 to 60)

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HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 at that APU in the box?  
2 A Less than an hour.  
3 Q And is that the extent of the examination of  
4 the Allied Signal APU, to your recollection?  
5 A Yes.  
6 MR. PUTNAM: Let me ask the court reporter to  
7 mark as --  
8 off the record for a second.  
9 (Discussion off the record.)  
10 MR. PUTNAM: Let me hand to the court reporter  
11 a document that I'd like to have marked as Suttie  
12 Deposition Exhibit No. 7. For the record, it is a  
13 two-page document with production numbers HSB 215489 and  
14 490.  
15 (Deposition Exhibit 7 marked.)  
16 BY MR. PUTNAM:  
17 Q And let me ask the witness to take a look at  
18 that document, please.  
19 Can you tell me what this document is, sir?  
20 A It's a Coordination Memo.  
21 Q And do you see in the middle of the bottom,  
22 sir, someone has written in handwriting, "Assigned:  
23 Suttie"?  
24 A I do see that.  
25 Q And was there any other Sutties working at

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1 issue?  
2 A I do.  
3 Q Can you tell me what the delta P/P noise issue  
4 was?  
5 A Yes, I can.  
6 Q Okay. Please do so.  
7 A The control system for the APS 3200 measures  
8 two static pressures, or there are two static ports, and  
9 we measure a delta static pressure and an absolute  
10 static pressure. At this stage in the program we had  
11 sensors which were measuring very noisy signals. And by  
12 "noisy," I mean the basic signal existed but there was  
13 significant fluctuations on the signal. That is a  
14 problem in control system development, and we were  
15 trying to eliminate the noise.  
16 Q And when it's written as it is in this  
17 document, sir, and I know in other documents, delta P/P,  
18 does that indicate a mathematical calculation whereby  
19 you're dividing the delta pressure by the pressure?  
20 MR. MCCracken: Objection; ambiguous.  
21 THE WITNESS: Could you be more specific?  
22 BY MR. PUTNAM:  
23 Q Well, let me ask you this way: In the APS 3200  
24 what's the point of measuring delta P/P?  
25 A We measure delta P static and divide it by duct

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1 Turbomeca or Sundstrand in the early 1990s besides  
2 yourself?  
3 A Yes.  
4 Q Who was that?  
5 A My wife.  
6 Q And what was her name?  
7 A Suzanne.  
8 Q Last name Suttie?  
9 A Suttie.  
10 Q What was her job?  
11 A She was in the planning department.  
12 Q Are you still married to Suzanne Suttie?  
13 A Yes.  
14 Q Does she still work at Sundstrand?  
15 A Yes.  
16 Q What is her current position?  
17 A She's lead planner, repair planner.  
18 Q And what does the planning department or lead  
19 planner do, generally?  
20 A They provision parts for engines which need  
21 service and need to be repaired.  
22 Q Is it fair to say that the Suttie who is  
23 assigned on this Coordination Memo was yourself?  
24 A Yes.  
25 Q Do you see references to the delta P/P noise

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1 pressure static to determine the appropriate position  
2 for the bleed control valve.  
3 Q And why does that measurement help you  
4 determine the appropriate position of the bleed control  
5 valve?  
6 A Can you restate that?  
7 MR. PUTNAM: Well, let me ask the court  
8 reporter to read the question back.  
9 (Last question read.)  
10 THE WITNESS: We have a relationship which  
11 shows delta P static divided by P static with respect to  
12 air flow from the load compressor.  
13 BY MR. PUTNAM:  
14 Q So you're saying that delta P/P is related to  
15 air flow from the load compressor?  
16 A Can you clarify what you mean by delta P/P?  
17 Q Well, the delta P/P that's in this document and  
18 a lot of documents over the 3200.  
19 A Which refer to delta P static over P static.  
20 Q Yes, sir, but in this document and others, it  
21 says delta P/P, correct? I understand that you've  
22 clarified and your testimony is on the record about what  
23 that delta P/P is. My question is, is the delta P/P  
24 that Sundstrand measures in the APS 3200 related to the  
25 air flow from the load compressor?

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16 (Pages 61 to 64)

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HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 A Yes.  
2 Q In what way is it related to the air flow from  
3 the compressor?  
4 A There is a relationship between the two values.  
5 Q What is that relationship?  
6 A I don't understand how to answer that question.  
7 Q Am I right that the delta P/P that Sundstrand  
8 measures in the 3200 is a way of measuring or  
9 quantifying the air flow that's coming in from the load  
10 compressor?  
11 A That is going out of the load compressor.  
12 Q Sorry. The air flow that is -- let me ask it  
13 again.  
14 Am I right that the delta P/P that Sundstrand  
15 measures in the 3200 is a way of quantifying the air  
16 flow that is going out of the load compressor?  
17 A Yes.  
18 Q And when air goes out of the load compressor in  
19 the APS 3200, where does it go?  
20 A One of two places.  
21 Q What are those two places?  
22 A To the aircraft delivery duct or it is bypassed  
23 to the APU exhaust duct.  
24 Q And am I right that in the APS 3200, it is the  
25 surge bleed valve that controls the extent to which air

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1 (Discussion off the record.)  
2 MR. PUTNAM: Back on the record. Let me  
3 restate the question.  
4 Q For the surge control valve in the APS 3200,  
5 why do you want to know the amount of air flow that is  
6 being delivered from the load compressor?  
7 A So that the control system can maintain  
8 surge-free operation.  
9 Q What do you mean by "surge"?  
10 A A violent thermodynamic phenomena in which the  
11 blades of the impeller stall and the pressure  
12 temporarily reverses on the impeller, temperature rises,  
13 the impeller operates in an unstable manner.  
14 Q When you say "the impeller," are you referring  
15 to the impeller on the load compressor?  
16 A Surge can happen on any impeller.  
17 Q Okay. When you're trying to control surge in  
18 this context, are you trying to control or prevent that  
19 violent phenomena occurring to the impeller on the load  
20 compressor?  
21 A Yes.  
22 Q And I think you said, as I understand it, surge  
23 at least temporarily causes the impeller to go  
24 backwards; is that right?  
25 A No.

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1 goes to the aircraft as opposed to the exhaust?  
2 A The valve is known as the bleed control valve.  
3 Q Am I right that in the APS 3200, it is what you  
4 call the bleed control valve that determines the extent  
5 to which air from the load compressor goes to the  
6 aircraft or the exhaust duct?  
7 A Yes.  
8 Q For operation of that bleed control valve, why  
9 is it useful to measure the delta P/P that you measure?  
10 A So that the control system can know  
11 approximately what air flow is being delivered from the  
12 load compressor.  
13 Q And am I right that knowing that measurement  
14 helps the system adjust operation of the bleed control  
15 valve in the APS 3200?  
16 A What do you mean by "that measurement"?  
17 Q The delta P/P measurement. Or in your words,  
18 the measurement of the air flow being delivered from the  
19 load compressor.  
20 MR. MCCracken: Objection; ambiguous.  
21 THE WITNESS: Can you repeat the question,  
22 please?  
23 MR. PUTNAM: Since there was an objection in  
24 the middle, let me restate it.  
25 Off the record.

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1 Q All right. What happens when an APU goes into  
2 surge?  
3 A The impeller continues to spin in its normal  
4 direction. The air flow temporarily goes backwards.  
5 Q And so what? Why do you care about preventing  
6 surge in the operation of an APU?  
7 A When the air goes backwards, high loads are  
8 applied to the impeller, to the impeller support  
9 system. It means temporarily the aircraft, which is  
10 requesting air, does not receive air. It is --  
11 Q In the normal operation of the APS 3200, should  
12 surge ever occur?  
13 A No.  
14 Q If surge occurs, is there some sort of repair  
15 that you'd need to do on the APU? What I'm trying to  
16 get is do you need to repair it after 100 surge  
17 episodes, or is one surge episode enough of a shock to  
18 the system that you'd then have to do significant  
19 repairs to the system?  
20 A There's no fixed number.  
21 Q Okay. In practice, does the APS 3200 ever go  
22 into surge?  
23 A I don't understand your question.  
24 Q Are you aware of an APS 3200 in operation on an  
25 airplane, ever going into surge?

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HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 A Yes.  
2 Q Approximately how often a year does that  
3 happen?  
4 A Do you mean in this past year or the first  
5 year?  
6 Q In the past 12 months, approximately how often  
7 has that happened?  
8 A Approximately three times.  
9 Q And on each of those occasions did Sundstrand  
10 or the aircraft manufacturer or the airline operator  
11 perform some type of inspection and repair to the APU?  
12 A No.  
13 Q If the APS 3200 goes into surge in the middle  
14 of a flight, is that dangerous to the continued flight  
15 of the airplane?  
16 A The APU is not typically used in flight.  
17 Q If it goes into surge in flight, might that  
18 impair the ability of the APU to restart the main  
19 engines during flight?  
20 A I don't know.  
21 Q Actually, I've always wondered about that. How  
22 many times in the last 12 months has the APS -- let me  
23 start this way.  
24 AM I right that one function of an APU like the  
25 APS 3200 is to provide the ability to restart the main

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1 Q Is that the sort of thing that would be  
2 reported to someone at Sundstrand if it happened?  
3 A No.  
4 Q Do some APUs have the ability to restart the  
5 main engines during flight?  
6 A Define what you mean by "restart the engines."  
7 Q Well, I've been told, maybe I'm wrong -- you're  
8 the witness here -- that at least some APUs, what I  
9 envisioned was the main engines would somehow stall out  
10 and the APU would provide some type of spark to get them  
11 restarted. I envision it like a spark plug or  
12 something. And that's not much of a question. I'm just  
13 asking, am I totally wrong or is there some function  
14 like that that some APUs sometimes have the ability to  
15 provide? That's my definition.  
16 MR. MCCracken: Objection; ambiguous.  
17 BY MR. PUTNAM:  
18 Q That's what I mean by "restart the engines,"  
19 which is what you wanted me to define.  
20 A The APU -- APS 3200 does not restart the  
21 engines. It can assist in restarting the engines.  
22 Q And how does it do that?  
23 A By supplying bleed air.  
24 Q To the main engine?  
25 A To the main engine air turbine start.

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1 engines in flight if those main engines stall out?  
2 A Can you repeat that, please.  
3 (Last question read.)  
4 THE WITNESS: No.  
5 BY MR. PUTNAM:  
6 Q Does the APS 3200 perform any functions or have  
7 the ability to perform any functions after the airplane  
8 gets off the ground?  
9 A Yes.  
10 Q What is that?  
11 A Supply bleed air and to supply electrical  
12 power.  
13 Q And does it typically provide those functions  
14 during flight?  
15 A No.  
16 Q Under what circumstances would it provide those  
17 functions?  
18 A An emergency situation or what's known as an  
19 ETOPS, extended twin operation.  
20 Q In the last 12 months on how many occasions has  
21 the APS 3200 provided any of those operations during an  
22 airplane flight?  
23 A I don't know.  
24 Q Is it more than zero?  
25 A I don't know.

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1 Q Which is what starts the main engines?  
2 A In the situation you defined, which would be  
3 assist starting the main engine.  
4 Q And am I right that you don't know on how many  
5 occasions in the last five years the APS 3200 has been  
6 used in that way, to assist the restart of the main  
7 engine?  
8 A You're correct.  
9 Q Do you know if it's more than zero?  
10 A I do not.  
11 Q Okay. We were looking at Suttie Exhibit 7 and  
12 this issue of the delta P/P noise issue. And you said  
13 that at this stage of the program, the sensors were  
14 measuring very noisy signals. What do you mean by a  
15 noisy signal?  
16 A Was my definition earlier insufficient?  
17 Q You used the phrase, we were measuring at this  
18 time very noisy signals. And I didn't follow up and ask  
19 you what did you mean by a noisy signal, and I'm now  
20 following up and asking you that.  
21 A A noisy signal would be a basic pressure.  
22 However, on top of that basic pressure there would be a  
23 sharply moving, effectively, superimposed signal,  
24 rendering the pressure measured by the control system,  
25 instead of a flat value, a value which jumps around.

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18 (Pages 69 to 72)



HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 Q And what was causing that superimposed signal?  
2 A I don't know.  
3 Q Did you ever solve the delta P/P noise issue  
4 for the 3200?  
5 A We successfully made the system function  
6 adequately.  
7 Q Did you ever solve the delta P/P noise issue?  
8 A Define what you mean by "solve."  
9 Q Well, this document that you're looking at that  
10 was sent to you says, attached is the current plan for  
11 solving the delta P/P noise issue. From your  
12 perspective was that issue ever solved?  
13 A I still don't know what you mean by "solved."  
14 Q Did you ever have a solution to the delta P/P  
15 noise issue?  
16 A If I were to answer, the delta P/P signal is  
17 still noisy, but as I mentioned, we worked to make our  
18 system work successfully.  
19 Q Do you see in Item No. 2 on the first page of  
20 Exhibit 7 on the first line, there is a reference to  
21 "3," and it's in capital letters, "GTCP-350 modules."  
22 Do you see that?  
23 A Yes, I do.  
24 Q What is a GTCP-350?  
25 A It's an Allied Signal APU.

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1 Garrett as the part of Allied Signal or Honeywell that  
2 makes APUs?  
3 A Yes.  
4 Q Okay. So GAPD refers to Allied Signal or  
5 Garrett, correct?  
6 A I took it to be that, yes.  
7 Q And if you turn to the top of the second page  
8 of Suttie Exhibit 7, do you see that it is headed "delta  
9 P/P Noise Solving Plan"?  
10 A Yes.  
11 Q And do you see at the very top there seems to  
12 be a series of tests proscribed for the GTCP 331-350 L/C  
13 module?  
14 A Yes.  
15 Q First of all, what does the capital L/C  
16 signify?  
17 A Load compressor.  
18 Q Okay. How did it happen that you were testing  
19 the Allied Signal GTCP-350 load compressor in October  
20 1992?  
21 MR. MCCracken: Objection; it assumes a fact  
22 not in evidence.  
23 THE WITNESS: I was not testing.  
24 BY MR. PUTNAM:  
25 Q How did it happen that Sundstrand was testing

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1 Q Okay. And what does GTCP stand for?  
2 A I don't know.  
3 Q And is the GTCP-350 the full name of the  
4 Allied Signal APU, or is it a shorthand for an APU that  
5 also goes by some other name?  
6 A I don't know.  
7 Q Am I correct that Allied Signal makes an APU  
8 that you know as the GTCP-350?  
9 A As I know, yes.  
10 Q To your knowledge, what aircraft employ the  
11 GTCP-350 APU?  
12 A To my knowledge, the A330 and perhaps the A340,  
13 but I am not sure.  
14 Q Okay. Do you see on the fourth line of Item  
15 No. 2 on the first page of Suttie Exhibit 7, it says,  
16 "GAPD uses" and then the rest of the sentence. Do you  
17 see that, sir?  
18 A Yes, I do.  
19 Q Is GAPD a reference to Allied Signal?  
20 A GAPD, as I understand it, refers to -- the G is  
21 Garrett. I don't know what the A and the PD stand for.  
22 Q But is it your understanding that Garrett is in  
23 some way a unit of Allied Signal?  
24 A Yes.  
25 Q In the APU business do you sometimes refer to

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1 that Allied Signal load compressor?  
2 MR. MCCracken: Objection; assumes a fact not  
3 in evidence.  
4 THE WITNESS: Sundstrand was not testing that.  
5 BY MR. PUTNAM:  
6 Q Okay. What's this a reference to then?  
7 A This is a Coordination Memo from Turbomeca.  
8 Q Was Turbomeca, to your knowledge, testing the  
9 Allied Signal GTCP-350 APU?  
10 A No.  
11 Q Well, who was doing what with the GTCP-350?  
12 A Turbomeca had designed it.  
13 Q How did that happen?  
14 A I don't know.  
15 Q Okay. So is it your understanding that  
16 Turbomeca had earlier worked with Allied Signal to  
17 design the GTCP-350?  
18 A To design a portion of it, yes.  
19 Q The load compressor portion?  
20 A As I understand, yes.  
21 Q Do you know who at Turbomeca had been involved  
22 in that design effort?  
23 A No.  
24 Q Was Mr. Ducroux involved in that design effort?  
25 A I don't know.

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19 (Pages 73 to 76)

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HONEYWELL V.  
HAMILTON SUNDSTRAND CORP.

PETER J. SUTTIE, VOL 1  
06/14/00

1 Q Does this memo show APIC using Turbomeca's  
2 knowledge of the Allied Signal GTCP-350 APU and load  
3 compressor in the course of designing the 3000/3200 APU?  
4 MR. MCCracken: Could you read the question  
5 back, please.  
6 (Last question read.)  
7 MR. MCCracken: Objection; ambiguous.  
8 THE WITNESS: Can you define what you mean by  
9 "Turbomeca's knowledge"?  
10 BY MR. PUTNAM:  
11 Q Knowledge that Turbomeca had gained by virtue  
12 of its work on the GTCP-350.  
13 MR. MCCracken: Objection; speculative.  
14 THE WITNESS: I apologize, can you read the  
15 question one more time.  
16 MR. PUTNAM: Let me read the question.  
17 Q Does this memo, Suttie Exhibit 7, show APIC  
18 using Turbomeca's knowledge of the Allied Signal  
19 GTCP-350 APU and load compressor in the course of  
20 designing the 3000/3200 APU?  
21 A No.  
22 (Deposition Exhibit 8 marked.)  
23 BY MR. PUTNAM:  
24 Q Mr. Suttie, let me ask you to take a look at  
25 what the court reporter has marked as Suttie Exhibit

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1 Q A range of what?  
2 A From zero to 5 pounds per square inch  
3 differential.  
4 Q You said "not to 5"?  
5 A Naught, zero.  
6 Q Why were you surprised by that?  
7 A For exactly what I said in the next sentence.  
8 Q Which is what?  
9 A "The APS 3200 load compressor uses a delta P  
10 sensor 0-25 psid, in tests we frequently see delta P  
11 values of approximately 20 psid."  
12 Q So your point was that you were surprised that  
13 Allied Signal's sensor only went up as far as 5 --  
14 A Correct.  
15 Q -- Psid since in your comparable measurements  
16 you had measured values much higher, correct?  
17 A Correct.  
18 Q What does Psid stand for?  
19 A Pounds per square inch differential.  
20 Q And the differential is associated with the  
21 fact that this is a delta measurement we're talking  
22 about, correct?  
23 A Correct.  
24 Q So this would be the differential between what  
25 and what?

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1 No. 8 which is a two-page Coordination Memo with  
2 production numbers HSA 190251 and 252 which appears to  
3 be a memo written by you about four days after Suttie  
4 Exhibit 7 that we were just looking at.  
5 Can you tell me what this memo is, please?  
6 A It's a response to the coord memo you already  
7 showed.  
8 Q In other words, Suttie Exhibit 8 is your  
9 response to your receipt of Suttie Exhibit 7, correct?  
10 A Yes.  
11 Q All right. Do you see No. 2 at the bottom of  
12 the page, you discuss the Allied Signal GTCP-350 load  
13 compressor?  
14 A Yes.  
15 Q What do you mean by the first sentence which  
16 says, "I am very surprised that GAPD," meaning Allied  
17 Signal, "uses a sensor 0-5 Psid"?  
18 A What did I mean?  
19 Q Yes, sir.  
20 A I was surprised.  
21 Q All right. Well, help me understand it. First  
22 of all, what did you mean by the phrase "a sensor 0-5  
23 Psid"?  
24 A It would be a range of naught to 5 pounds per  
25 square inch differential.

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1 A In the APS 3200 system, between a static  
2 pressure measured in the diffuser and a static pressure  
3 measured in the duct.  
4 Q And am I correct that the reason you were  
5 surprised here on Suttie Exhibit 8 is because the  
6 pressure differential that Honeywell was measuring was  
7 comparable to the pressure differential that Sundstrand  
8 was measuring?  
9 A No.  
10 Q Why not?  
11 A Because it's not comparable.  
12 Q Why wasn't it comparable?  
13 A A range of naught to 5 is not comparable as  
14 naught to 25.  
15 Q What's the explanation for the difference?  
16 A I don't know.  
17 Q Am I correct that this memo -- well, let me do  
18 it this way, do it in steps. First of all, Suttie  
19 Exhibit 8 is a memo that you wrote in October 1992,  
20 correct?  
21 A Yes.  
22 Q And in part, the memo discusses data regarding  
23 the operation of the Honeywell APU load compressor,  
24 correct?  
25 A The APU designed by Turbomeca. Sorry, the load

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20 (Pages 77 to 80)

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1 compressor for that APU designed by Turbomeca.  
2 Q Yes, sir. And that's the GTCP-350, correct?  
3 A Yes.  
4 Q And that's an APU that's currently sold by  
5 Allied Signal, correct?  
6 A As I understand, yes.  
7 MR. MCCracken: Could we go off the record for  
8 a moment?  
9 MR. PUTNAM: Sure.  
10 (Recess.)  
11 (Deposition Exhibit 9 marked.)  
12 BY MR. PUTNAM:  
13 Q Mr. Suttie, let me hand you what the court  
14 reporter has marked as Suttie Deposition Exhibit No. 9  
15 which is a large document with production numbers  
16 HSA 96782 through 96965; and I'll note that on the cover  
17 page it says "APS 3200 ECB Requirements Specifications,"  
18 and then on the right, "Revision N." Do you have that  
19 document in front of you?  
20 A I have the document you've just described.  
21 Q And can you tell me what that is, please?  
22 A This looks like the APS 3200 requirements  
23 specification.  
24 MR. MCCracken: And if I may just put on the  
25 record the circumstances under which this document was

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1 control box requirements document?  
2 A Yes, I am aware that there are issues.  
3 Q Related to what aspects of this requirements  
4 document?  
5 A That from time to time requirements stated here  
6 were not coded accurately in the software.  
7 Q And have there been attempts to change the  
8 software to make the coding accurate, or rather, to make  
9 the coding conform to Revision N, Exhibit 9 here?  
10 A No.  
11 Q Is there a better single document than this  
12 one, Suttie Exhibit 9, to tell us how the APS 3200  
13 electronic control box works?  
14 A No.  
15 Q This is the best we've got?  
16 A This is the best we've got.  
17 Q Because that was potentially ambiguous. This  
18 is the best you've got as well. Maybe the best I've  
19 got, but the best you've got. If you were going to  
20 explain how the APS 3200 electronic control box worked,  
21 is it fair that you would use Suttie Exhibit 9?  
22 A Yes.  
23 Q Thank you. We'll come back to that later.  
24 I'll put on the record, thank you, Counsel, for  
25 supplying that to us.

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1 provided. We provided this as a courtesy to Mr. Putnam,  
2 and we believe that the document is a complete document,  
3 although obviously it being so lengthy, we can't  
4 guarantee that in fact it is complete.  
5 BY MR. PUTNAM:  
6 Q And, Mr. Suttie, am I correct that this  
7 document, Suttie Exhibit 9, contains the current  
8 engineering specifications for the APS 3200 electronic  
9 control box?  
10 A It's a requirements document for that box.  
11 Q And is it a current requirements document?  
12 A It is a current document.  
13 Q So -- because this is the important point that  
14 your counsel and I discussed off the record. If I  
15 wanted information or diagrams about how the APS 3200  
16 electronic control box operates currently, Suttie  
17 Exhibit 9 should tell me that information, correct?  
18 A Not necessarily.  
19 Q What's incorrect about my statement?  
20 A This is a requirements document which other  
21 engineers take and transfer into code. That transfer is  
22 not always 100 percent accurate. There are times when  
23 requirements do not translate to actual function.  
24 Q Okay. And are you aware of any such instances  
25 with regard to Revision N of the APS 3200 electronic

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1 MR. MCCracken: You're welcome.  
2 BY MR. PUTNAM:  
3 Q Let me ask you to turn back, sir, to Exhibit 7  
4 and 8. And looking at Exhibit 7, do you see that that's  
5 authored by a Mr. G. Hardy?  
6 A Correct.  
7 Q Who is that or who was that in October 1992?  
8 A Gerard Hardy.  
9 Q And was he a Sundstrand or a Turbomeca  
10 employee?  
11 A Turbomeca.  
12 Q Am I right that he was at that time your  
13 counterpart at Turbomeca?  
14 A My counterpart when?  
15 Q Well, in October 1992 what was Mr. Hardy's  
16 position or job at Turbomeca?  
17 A He was the program manager.  
18 Q For the APS 3200?  
19 A Correct.  
20 Q And when you say in Exhibit 8, I am surprised  
21 that Allied Signal uses a sensor with zero to 5 pounds  
22 per square inch differential, I take it you knew that  
23 fact, you knew what it was that Allied Signal's sensor  
24 sensed by virtue of the statement that Mr. Hardy had  
25 made to you in Exhibit 7; is that correct?

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1 A No.  
2 Q Okay. How did you know the fact of what  
3 Allied Signal's sensor sensed, as you set it forth in  
4 Exhibit 8?  
5 A Can you repeat your previous question?  
6 MR. PUTNAM: Let me have the court reporter  
7 read back the question, answer, question.  
8 (Record read.)  
9 THE WITNESS: You said "by virtue of." I  
10 missed that. The answer is yes.  
11 BY MR. PUTNAM:  
12 Q So the answer to my question two previous to  
13 now was "yes," not "no," correct?  
14 A Correct.  
15 Q Okay. Now, do you see on Exhibit 8 the fourth  
16 line under 2 says, "Data from B. Macarez indicates that  
17 the GAPD sensor used to be 0-20 psid"?  
18 A Yes, I see that.  
19 Q Who was B. Macarez in October 1992?  
20 A Bernie Macarez was the Turbomeca coordination  
21 engineer.  
22 Q And what were his duties and responsibilities  
23 as a coordination engineer?  
24 A He resided in San Diego and he -- his function  
25 was to improve communication between Sundstrand and

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1 Q Exhibit 7?  
2 A Exhibit 7.  
3 Q Why did you think Mr. Hardy might know the  
4 answer to that question?  
5 A Because of the information he supplied to me in  
6 his Coordination Memo to me.  
7 Q Referring again to Exhibit 7?  
8 A Yes.  
9 Q Why did you want to know the answer to that  
10 question when you sent it to Mr. Hardy in Exhibit 8?  
11 A No specific reason.  
12 Q Idle curiosity?  
13 A Yes.  
14 MR. PUTNAM: Can you mark this as Suttie 10,  
15 please.  
16 (Deposition Exhibit 10 marked.)  
17 MR. PUTNAM: Back on the record.  
18 Q Mr. Suttie, I've handed you what the court  
19 reporter has marked as Suttie Exhibit No. 10 which is a  
20 one-page Coordination Memo with production number  
21 HSB 215488. Do you have that document in front of you?  
22 A HSB 215488?  
23 Q Yes, sir.  
24 A Yes, I do.  
25 Q And do you see that this is dated the day after

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1 Turbomeca.  
2 Q And when did he supply to you this data about  
3 Allied Signal's sensor that you referred to here in  
4 Exhibit 8?  
5 A I don't recall.  
6 Q Was it shortly before you wrote the memo on  
7 October 26, 1992?  
8 A I don't recall.  
9 Q Do you see the last sentence in 2A on Suttie  
10 Exhibit 8 is a question that you were asking to  
11 Mr. Hardy, correct?  
12 A Correct.  
13 Q And it contains the phrase, in parentheses,  
14 pitot, p-i-t-o-t, tube. What did that mean?  
15 A Pitot tube is the pronunciation. It is a  
16 method of measuring air flow.  
17 Q Okay. And as I understand it, you were asking  
18 Mr. Hardy whether Allied Signal had in its APU returned  
19 to their earlier method of measuring air flow; is that  
20 correct?  
21 A Correct.  
22 Q And why was -- why were you asking that to  
23 Mr. Hardy?  
24 A It was a response to his Coordination Memo to  
25 me.

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1 Exhibit 8, it's dated October 27th, 1992?  
2 A Yes, I do.  
3 Q And it's from a Mr. -- who is this from?  
4 A Dominic Tuquoi.  
5 Q And what was Mr. Tuquoi's position in October  
6 1992?  
7 A He was a project engineer.  
8 Q And was he a Turbomeca employee who was  
9 assigned to the APS 3200 project?  
10 A Yes.  
11 Q And was he a project engineer specifically for  
12 the controls part of the APS 3200?  
13 A No.  
14 Q What was he a project engineer for?  
15 A All of Turbomeca's portion.  
16 Q Of the 3200?  
17 A Of the 3200.  
18 MR. MCCracken: I'd like to register a general  
19 objection to the nature of this questioning. I don't  
20 believe it's relevant to the issues in the lawsuit.  
21 MR. PUTNAM: The objection is noted.  
22 MR. MCCracken: And I will not repeat them with  
23 your understanding that it's a general objection.  
24 MR. PUTNAM: I think that's a sensible way to  
25 proceed.

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22 (Pages 85 to 88)

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1 Q Do you see on the second line of the  
2 Coordination Memo here, there's a reference to the  
3 Garrett modules and Q23?  
4 A Yes.  
5 Q What is Q23?  
6 A It was one of our qualification APUs.  
7 Q What do you mean by "qualification APU"?  
8 A An engine built prior to production with the  
9 purpose of qualifying the design.  
10 Q In this case it was attempting to qualify the  
11 design for what became the APS 3200, correct?  
12 A Yes.  
13 Q And am I correct that this memo shows that  
14 Turbomeca was testing together both your Q23  
15 qualification APU and some Garrett APUs that it had in  
16 its possession?  
17 MR. MCCracken: Objection; speculative.  
18 THE WITNESS: That's my understanding of the  
19 words.  
20 MR. PUTNAM: Let me ask the court reporter to  
21 mark this next document as Exhibit Suttie 11.  
22 (Deposition Exhibit 11 marked.)  
23 BY MR. PUTNAM:  
24 Q Mr. Suttie, I've handed you what the court  
25 reporter has marked as Suttie Exhibit No. 11 which is a

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1 side of the table know?  
2 MR. MILLER: I don't know.  
3 MR. PUTNAM: Okay.  
4 Q Let me ask it this way, Mr. Suttie: Is the  
5 document that I've given you as Suttie Exhibit 11  
6 something that's maintained in your files?  
7 A I don't recall.  
8 Q All right. Let me ask you, did you supply  
9 information from your files to the attorneys for  
10 Sundstrand in connection with this litigation?  
11 A Yes.  
12 Q Do you know if this document, Suttie  
13 Exhibit 11, was among that information?  
14 A I don't recall.  
15 MR. PUTNAM: Mr. McCracken, I take it you  
16 don't know offhand whether this document came from  
17 Mr. Suttie's files or not?  
18 MR. MCCracken: I do not.  
19 MR. PUTNAM: All right.  
20 Q Now, who was Bob Fleming in November 1992?  
21 A He was the Sundstrand engineer resident at  
22 Turbomeca.  
23 Q So just as Mr. Macarez was a Turbomeca person  
24 at Sundstrand, Mr. Fleming was a Sundstrand person at  
25 Turbomeca, correct?

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1 document with production numbers HSA 161463 through  
2 161476. Let me ask you to take a look at that document  
3 and tell me if you can tell me what it is.  
4 A It's a memo from Bob Fleming to me.  
5 Q Okay. And I think actually you were referring  
6 to the second page of the document; is that correct?  
7 A Correct.  
8 Q Do you recognize the handwriting on the first  
9 page of the document?  
10 A Yes, I do.  
11 Q Is that your handwriting?  
12 A Yes, it is.  
13 Q And this is the way it was produced to us,  
14 Mr. Suttie, but is it your understanding that the first  
15 page of Suttie Exhibit 11 is the xerox of a file folder  
16 maintained in your files, and then the rest of Suttie  
17 Exhibit 11 is a document that you maintained in a file  
18 that has that label on it?  
19 A No.  
20 MR. PUTNAM: Mr. McCracken, I guess I take it  
21 from you because it's just an artifact of how it was  
22 produced to us. Do you know the explanation for why it  
23 was produced like this?  
24 MR. MCCracken: I do not, no.  
25 MR. PUTNAM: Do any of your colleagues on your

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1 A Correct.  
2 Q And am I correct that the document that is  
3 attached to the fax cover sheet here is a document that  
4 Mr. Fleming sent to you in November 1992?  
5 A It appears to be.  
6 Q Okay. And then the handwriting on the bottom  
7 half of the page, is that your handwriting, sir?  
8 A Yes.  
9 Q And can you explain that to me, please?  
10 A Not without reading and taking some time to  
11 recall what I was trying to say.  
12 Q Please do so, sir.  
13 Off the record for a second.  
14 (Discussion off the record.)  
15 MR. PUTNAM: Let me go back on the record.  
16 To put on the record the conclusion of our  
17 off-the-record discussion, certain copies of Suttie  
18 Exhibit 11 including the one that was handed to the  
19 witness inadvertently had stapled to it additional pages  
20 that I believe were not associated with the original  
21 document. The exhibit that's marked as Suttie  
22 Exhibit 11 should include only pages HSA 161463 through  
23 HSA 161476.  
24 Q Mr. Suttie, am I correct that the --  
25 MR. MCCracken: May I make a comment first? I

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23 (Pages 89 to 92)

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